

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Chandrashekhar P. Pathak, Shikha P. Barman, C. Michael Philbrook, Amarpreet S. Sawhney, Arthur J. Coury, Luis Z. Avila, and Mark T. Kieras

Serial No.: Divisional of 10/114,722 Art Unit: Not Yet Assigned

Filed: August 27, 2003 Examiner: Not Yet Assigned

For: *MULTIBLOCK BIODEGRADABLE HYDROGELS FOR DRUG DELIVERY
AND TISSUE TREATMENT*

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

Pursuant to 37 C.F.R. §1.56 and 37 C.F.R. §1.97, Applicants submit an Information Disclosure Statement, including six (6) pages of Form PTO-1449. All of the documents cited below were cited by or submitted to the Patent Office in Application Serial No. 10/114,722, filed April 2, 2002, to which the present application claims priority. Pursuant to 37 C.F.R. §1.98(d), Applicants are not enclosing copies of these publications. Copies will be provided upon request, however.

This Information Disclosure Statement is being filed under 37 C.F.R. § 1.97(b) prior to a first Office Action on the merits. It is believed that no fee is required with this submission. However, should a fee be required, the Commissioner is hereby authorized to charge any required fees to Deposit Account No. 50-1868.

U.S. Patents

<u>Number</u>	<u>Issue Date</u>	<u>Patentee</u>	<u>Class/Subclass</u>
3,931,148	01-06-1976	Langdon	260/210 R
3,931,337	01-06-1976	Langdon	260/615 A
3,954,886	05-04-1976	Langdon	260/615 A
4,072,704	02-07-1978	Langdon	260/463
4,178,434	12-11-1979	Langdon	528/405
4,189,609	02-19-1990	Langdon	568/601
4,191,820	03-04-1980	Langdon	528/405
4,261,704	04-14-1981	Langdon	44/62
4,281,199	07-28-1981	Langdon	564/475
4,287,078	09-01-1981	Langdon, et al.	252/76
4,314,000	02-02-1982	Thir, et al.	428/265
4,408,084	10-04-1983	Langdon	568/601
4,504,418	03-12-1985	Langdon	260/463
4,519,950	05-28-1985	Langdon	260/404
4,526,938	07-02-1985	Churchill, et al.	525/415
4,716,203	12-29-1987	Casey, et al.	525/408
4,741,337	05-03-1988	Smith, et al.	128/334 R
4,757,128	07-12-1988	Domb, et al.	528/271
4,789,724	12-06-1988	Domb, et al.	528/176
4,818,542	04-04-1989	DeLuca, et al.	424/491
4,826,945	05-02-1989	Cohn, et al.	528/76
4,857,311	08-15-1989	Domb, et al.	424/78
4,888,176	12-19-1989	Langer, et al.	424/426
4,938,763	07-03-1990	Dunn, et al.	604/891.1
4,957,744	09-18-1990	della Valle, et al.	424/401
4,987,744	01-29-1991	Handley, et al.	62/24
5,078,994	01-07-1992	Nair, et al.	424/501
5,145,518	09-08-1992	Winnik, et al.	106/21
5,160,745	11-03-1992	DeLuca, et al.	424/487
5,213,580	05-25-1993	Slepian, et al.	623/1
5,219,564	06-15-1993	Zalipsky, et al.	424/78.17
5,296,627	03-22-1994	Tang, et al.	558/34
5,328,471	07-12-1994	Slepian	604/101
5,403,893	04-04-1995	Tanaka, et al.	525/218
5,410,016	04-25-1995	Hubbell, et al.	528/354
5,415,864	05-16-1995	Kopecek, et al.	424/436
5,417,983	05-23-1995	Nagase, et al.	424/487
5,418,301	05-23-1995	Hult, et al.	525/437
5,429,826	07-04-1995	Nair, et al.	424/501
5,496,581	03-05-1996	Yianni, et al.	427/2.12
5,508,317	04-16-1996	Müller	522/85
5,510,103	04-23-1996	Yokoyama, et al.	424/8.08

U.S.S.N.: Divisional of 10/114,722
Filed: August 27, 2003
INFORMATION DISCLOSURE STATEMENT

5,512,091	04-10-1996	Steiner	106/197.1
5,525,657	06-11-1996	Anchor, et al.	524/261
5,858,746	01-12-1999	Hubbell, et al.	435/177

Foreign Documents

<u>Number</u>	<u>Publication Date</u>	<u>Patentee</u>	<u>Country</u>
93/17669	09-16-1993	Board of Regents, The University of Texas System	PCT
94/21324	09-29-1994	Focal, Inc.	PCT
97/15287	05-01-1997	Macromed, Inc.	PCT
0 108 933	05-23-1994	American Cyanamid Co.	Europe
0 552 802	07-28-1993	Eastman Kodak Company	Europe
0 552 802	07-28-1993	Eastman Kodak Company	Europe
1 595 369	04-09-1970	Badische Anilin & Soda-Fabrik AG	Germany

Publications

ALEXANDRIDIS, et al., "Micellization of Poly(ethylene oxide)-Poly(propylene oxide)-Poly(ethylene oxide) Triblock Copolymers in Aqueous Solutions: Thermodynamics of Copolymer Association," *Macromolecules* 27(9):2414 (1994).

ASANO, et al., "Fluorescence Studies of Dansyl-Labeled Poly(*N*-isopropylacrylamide) Gels and Polymers in Mixed Water/Methanol Solutions," *Macromolecules* 28:5861-5866 (1995).

BAE, et al., "'On-Off' Thermocontrol of Solute Transport. I. Temperature Dependence of Swelling of *N*-Isopropylacrylamide Networks Modified with Hydrophobic Components in Water," *Pharmaceutical Research* 8(4):531-537 (1991).

BIRRENBACH, et al., "Polymerized Micelles and Their Use as Adjuvants in Immunology," *J. Pharm. Sci.* 65(12):1763-1766 (1976).

CHEN, et al., "Novel Graft Copolymers Of A Temperature-Sensitive Polymer Grafted To A pH-Sensitive, Bioadhesive Polymer For Controlled Drug Delivery", 21st Annual Meeting Of The Society For Biomaterials (1995).

COUVREUR, et al., "Nanocapsules: A New Type of Lysosomotropic Carrier," *FEBS Letters* 84(2):323-326 (1977).

DESAI, et al., "Surface Modifications of Polymeric Biomaterials for Reduced Thrombogenicity," *Polym. Mater. Sci. Eng.* 62:731-735 (1991).

DESAI, et al., "Tissue Response to Intraperitoneal Implants of Polyethylene Oxide-Modified Polyethylene Terephthalate," submitted to *Biomaterials* pp. 1-12.

DOMB, et al., "Poly(anhydrides). 3. Poly(anhydrides) Based on Aliphatic-Aromatic Diacids," *Macromolecules* 22(8):3200-3204 (1989).

HELLER, et al., "Biodegradable Polymers as Drug Delivery Systems," Chasin, M. and Langer, R., eds., (Marcel Dekker, Inc., New York, 1990) (Table of Contents).

HILL-WEST, et al., "Prevention of Postoperative Adhesions in the Rat by *In Situ* Photopolymerization of Bioresorbable Hydrogel Barriers," *Obstetrics & Gynecology* 83(1):59-64 (1994).

HOFFMAN, et al., "Applications of Thermally Reversible Polymers and Hydrogels in Therapeutics and Diagnostics," *J. Controlled Release* 6:297-305 (1987).

HOLLAND, et al., "Polymers for Biodegradable Medical Devices. 1. The Potential of Polyesters as Controlled Macromolecular Release Systems," *Controlled Release* 4(3):155-180 (1986).

ISHIZU, et al., "Core-Shell Type Polymer Microspheres Prepared from Block Copolymers," *J. Polymer Science: Part C: Polymer Letters* 26:281-286 (1988).

KATAOKA, et al., "Block copolymer micelles as vehicles for drug delivery," *J. Controlled Release* 24(1-3):119-132 (1993).

KULKARNI, et al., "Polylactic Acid for Surgical Implants," *Arch. Surg.* 93(5):839-843 (1966).

MARSH, et al., "Lipid-Absorbing Polymers," *JPL Quarterly Technical Review* 2(4):1-6 (1974).

NAGAOKA, et al., "Interaction Between Blood Components and Hydrogels with Poly(Oxyethylene) Chains," Polymers As Biomaterials, (Shalaby, ed.), pp. 361-374 (Plenum Press, New York and London).

PARK, et al., "Synthesis of microphased core-corona type microgel," *Polymer Commun.* 29:230-231 (1988).

ROLLAND, et al., "New Macromolecular Carriers for Drugs. I. Preparation and Characterization of Poly(oxyethylene-*b*-isoprene-*b*-oxyethylene) Block Copolymer Aggregates," *J. App. Polymer Sci.* 44:1195-1203 (1992).

SAWHNEY, et al., The 21st Annual Meeting of the Society for Biomaterials, (San Francisco, CA, 1995).

SAWHNEY, et al., "Bioerodible Hydrogels Based on Photopolymerized Poly(ethylene glycol)-co-poly(α -hydroxy acid) Diacrylate Macromers," *Macromolecules* 26(4):581-587 (1993).

SAWHNEY, et al., "Rapidly degraded terpolymers of dl-lactide, glycolide, and ϵ -caprolactone with increased hydrophilicity by copolymerization with polyethers," *J. Biomed. Mater. Res.* 24(10):1397-1411 (1990).

SPLIZEWSKI, et al., "*In Vitro* Apparatus for Controlled Release Studies and Intrinsic Rate of Permeation," *J. Control. Rel.* 1(3):197-203 (1985).

TANAKA, et al., "Immobilization of Yeast Microbodies by Inclusion with Photocrosslinkable Resins," *Eur. J. Biochem.* 80:193-197 (1977).

WILSON, et al., "Photochemical Stabilization of Block Copolymer Micelles," *Eur. Polym. J.* 24(7):617-621 (1988).

YOKOYAMA, et al., "Polymer Micelles as Novel Drug Carrier: Adriamycin-Conjugated Poly(ethylene Glycol)-Poly(aspartic Acid) Block Copolymer," *J. Controlled Release* 11:269-278 (1990).



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Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)		Complete if Known	
		Application Number	Divisional of 10/114,722
		Filing Date	August 27, 2003
		First Named Inventor	Chandrashekhar P. Pathak
		Group Art Unit	
		Examiner Name	
Sheet 1 of 6	Attorney Docket Number	FTI 112 CIP DCD	

U.S. PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	US Patent Document		Name of Patentee or Applicant of Cited Document	Date of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ² (if known)			
		3,931,148		Langdon	01-06-1976	
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		WO	93/17669	A1	Board of Regents, The University of Texas System	09-16-1993		
		WO	94/21324	A1	Focal, Inc.	09-29-1994		
		WO	97/15287	A1	Macromed, Inc.	05-01-1997		
		EP	0 108 933	A1	American Cyanamid Co.	05-23-1994		
		EP	0 552 802	A2	Eastman Kodak Company	07-28-1993		
		EP	0 552 802	A3	Eastman Kodak Company	07-28-1993		

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		4,757,128		Domb, et al.	07-12-1988	
		4,789,724		Domb, et al.	12-06-1988	
		4,818,542		DeLuca, et al.	04-04-1989	
		4,826,945		Cohn, et al.	05-02-1989	
		4,857,311		Domb, et al.	08-15-1989	
		4,888,176		Langer, et al.	12-19-1989	
		4,938,763		Dunn, et al.	07-03-1990	
		4,957,744		della Valle, et al.	09-18-1990	
		4,987,744		Handley, et al.	01-29-1991	
		5,078,994		Nair, et al.	01-07-1992	
		5,145,518		Winnik, et al.	09-08-1992	
		5,160,745		DeLuca, et al.	11-03-1992	
		5,213,580		Slepian, et al.	05-25-1993	

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		DE	1 595 369		Badische Anilin & Soda-Fabrik AG	04-09-1970	

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		5,328,471		Slepian	07-12-1994	
		5,403,893		Tanaka, et al.	04-04-1995	
		5,410,016		Hubbell, et al.	04-25-1995	
		5,415,864		Kopecek, et al.	05-16-1995	
		5,417,983		Nagase, et al.	05-23-1995	
		5,418,301		Hult, et al.	05-23-1995	
		5,429,826		Nair, et al.	07-04-1995	
		5,496,581		Yianni, et al.	03-05-1996	
		5,508,317		Müller	04-16-1996	
		5,510,103		Yokoyama, et al.	04-23-1996	
		5,512,091		Steiner	04-10-1996	
		5,525,657		Anchor, et al.	06-11-1996	
		5,858,746		Hubbell, et al.	01-12-1999	

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OTHER ART -- NON PATENT LITERATURE DOCUMENTS			
Examiner's Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T ²
		ALEXANDRIDIS, et al., "Micellization of Poly(ethylene oxide)-Poly(propylene oxide)-Poly(ethylene oxide) Triblock Copolymers in Aqueous Solutions: Thermodynamics of Copolymer Association," <i>Macromolecules</i> 27(9):2414 (1994).	
		ASANO, et al., "Fluorescence Studies of Dansyl-Labeled Poly(N-isopropylacrylamide) Gels and Polymers in Mixed Water/Methanol Solutions," <i>Macromolecules</i> 28:5861-5866 (1995).	
		BAE, et al., "On-Off Thermocontrol of Solute Transport. I. Temperature Dependence of Swelling of N-Isopropylacrylamide Networks Modified with Hydrophobic Components in Water," <i>Pharmaceutical Research</i> 8(4):531-537 (1991).	
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		HILL-WEST, et al., "Prevention of Postoperative Adhesions in the Rat by <i>In Situ</i> Photopolymerization of Bioresorbable Hydrogel Barriers," <i>Obstetrics & Gynecology</i> 83(1):59-64 (1994).	
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		HOLLAND, et al., "Polymers for Biodegradable Medical Devices. 1. The Potential of Polyesters as Controlled Macromolecular Release Systems," <i>Controlled Release</i> 4(3):155-180 (1986).	
		ISHIZU, et al., "Core-Shell Type Polymer Microspheres Prepared from Block Copolymers," <i>J. Polymer Science: Part C: Polymer Letters</i> 26:281-286 (1988).	
		KATAOKA, et al., "Block copolymer micelles as vehicles for drug delivery," <i>J. Controlled Release</i> 24(1-3):119-132 (1993).	
		KULKARNI, et al., "Poly(lactic Acid for Surgical Implants," <i>Arch. Surg.</i> 93(5):839-843 (1966).	
		MARSH, et al., "Lipid-Absorbing Polymers," <i>JPL Quarterly Technical Review</i> 2(4):1-6 (1974).	
		NAGAOKA, et al., "Interaction Between Blood Components and Hydrogels with Poly(Oxyethylene) Chains," <i>Polymers As Biomaterials</i> , (Shalaby, ed.), pp. 361-374 (Plenum Press, New York and London).	
		PARK, et al., "Synthesis of microphased core-corona type microgel," <i>Polymer Commun.</i> 29:230-231 (1988).	
		ROLLAND, et al., "New Macromolecular Carriers for Drugs. I. Preparation and Characterization of Poly(oxyethylene- <i>b</i> -isoprene- <i>b</i> -oxyethylene) Block Copolymer Aggregates," <i>J. App. Polymer Sci.</i> 44:1195-1203 (1992).	

Examiner's Signature		Date Considered	
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				Application Number		Divisional of 10/114,722	
				Filing Date		August 27, 2003	
				First Named Inventor		Chandrashekhar P. Pathak	
				Group Art Unit			
				Examiner Name			
Sheet	6	of	6	Attorney Docket Number		FTI 112 CIP DCD	

OTHER ART -- NON PATENT LITERATURE DOCUMENTS			
Examiner's Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T ²
		SAWHNEY, et al., "Bioerodible Hydrogels Based on Photopolymerized Poly(ethylene glycol)-co-poly(α-hydroxy acid) Diacrylate Macromers," <i>Macromolecules</i> 26(4):581-587 (1993).	
		SAWHNEY, et al., "Rapidly degraded terpolymers of dl-lactide, glycolide, and ε-caprolactone with increased hydrophilicity by copolymerization with polyethers," <i>J. Biomed. Mater. Res.</i> 24(10):1397-1411 (1990).	
		SAWHNEY, et al., <u>The 21st Annual Meeting of the Society for Biomaterials</u> , (San Francisco, CA, 1995).	
		SPILIZEWSKI, et al., "In Vitro Apparatus for Controlled Release Studies and Intrinsic Rate of Permeation," <i>J. Control. Rel.</i> 1(3):197-203 (1985).	
		TANAKA, et al., "Immobilization of Yeast Microbodies by Inclusion with Photo-crosslinkable Resins," <i>Eur. J. Biochem.</i> 80:193-197 (1977).	
		WILSON, et al., "Photochemical Stabilization of Block Copolymer Micelles," <i>Eur. Polym. J.</i> 24(7):617-621 (1988).	
		YOKOYAMA, et al., "Polymer Micelles as Novel Drug Carrier: Adriamycin-Conjugated Poly(ethylene Glycol)-Poly(aspartic Acid) Block Copolymer," <i>J. Controlled Release</i> 11:269-278 (1990).	

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